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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,477	07/11/2003	Lotte Rugholm Henriksen	5683.210-US	5300

25908 7590 07/06/2005

NOVOZYMES NORTH AMERICA, INC.  
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NEW YORK, NY 10110

EXAMINER

NAFF, DAVID M

ART UNIT	PAPER NUMBER
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1651

DATE MAILED: 07/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/618,477

Applicant(s)

HENRIKSEN ET AL.

Examiner

David M. Naff

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 19-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
  - 2) ☒ Certified copies of the priority documents have been received in Application No. 09/410,503.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                                              |                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                                             | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/11/03</u> . | 6) <input type="checkbox"/> Other: _____                                                |

**DETAILED ACTION**

A preliminary amendment of 7/11/03 canceled claims 1-18.

Claims examined on the merits are 19-33, which are all claims in the application.

***Claim Objections***

Claims 28-33 are objected to because of the following informalities: claims 28-33 presented in the preliminary amendment are improperly dependent by depending on claims 30-35, respectively. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35

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U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 19-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Lima et al (6,136,772) or Harz et al (5,972,669) or Lassen et al (6,060,298) in view of Linton et al (4,859,485) and Akhtar (5,750,005).

The claims are drawn to a solid phytase composition consisting essentially of an enzyme having phytase activity of above 20 FYT/g of the composition, and a lactic acid source in an amount of 0.01-15% by weight to provide lactic acid in an amount sufficient to stabilize the enzyme.

De Lima et al (Example 26-28), Harz et al (col 3, line 59 to col 4, line 46) and Lassen et al (col 13, line 57 to col 15, line 41) disclose compositions containing phytase for use as an animal feed additive.

Linton et al disclose an animal feed supplement containing a mixture of corn bran and corn steep liquor. The corn steep liquor is an economical source of protein in animal feed (col 1, lines 35-68, and col 4, lines 3-17). The mixture is compacted to form a moist, cohesive, friable, readily transportable mass.

Akhtar discloses that corn steep liquor is used as a supplement and nutrient source for ruminants and poultry, and that the liquor on a dry basis contains 16% lactic acid (col 6, lines 32-44).

It would have been obvious to add corn steep liquor to the phytase-containing feed additive composition of De Lima et al or Harz

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et al or Lassen et al to obtain the function of the corn steep liquor as a nutrient source in feed as disclosed by Linton et al and Akhtar. Corn steep liquor contains lactic acid as disclosed by Akhtar, and corn steep liquor would have inherently been a source of lactic acid.

5 Providing an amount of corn steep liquor as suggested by Linton et al and Akhtar would have resulted in 0.01-15% as claimed. Moreover, using a preferred amount of lactic acid source would have been a matter of individual preference within the skill of the art. Adding sufficient phytase to provide an activity of at least 20 FYT/g would  
10 have been a matter of individual preference for a certain phytase activity, and obtaining this activity would have simply required adding a sufficient amount of phytase to provide the activity. This also applies to activities required by claims 27-33. Corn steep liquor would have provided the additional components of dependent  
15 claims. If not provided by corn steep liquor, such components in an animal feed additive are conventional, and their addition would have been obvious. Adding the corn steep liquor in dry form to the phytase composition would have been obvious to provide a composition that is stable during storage and has less bulk for transportation. The  
20 present claims do not exclude a moist solid as disclosed by De Lima et al. Moreover, it would have been obvious to further dry the composition to obtain greater storage stability and less bulk for transportation.

***Claim Rejections - 35 USC § 103***

Claims 19-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Linton et al in view of De Lima et al or Harz et al or Lassen et al and Akhtar.

5       The invention and the references are described above.

It would have been obvious to add phytase to the feed supplement composition of Linton et al containing corn steep liquor to obtain the function of phytase as a feed additive as suggested by De Lima et al or Harz et al or Lassen et al. Corn steep liquor would have  
10 inherently been a source of lactic acid as is apparent from Akhtar. An amount of corn steep liquor in a range of 0.01-15% would have been obvious from the amount provided as Linton et al. Additionally, adding a preferred amount would have been a matter of individual preference within the skill of the art. Adding sufficient phytase to  
15 provide an activity of at least 20 FYT/g would have been a matter of individual preference for a certain phytase activity, and obtaining this activity would have simply required adding a sufficient amount of phytase to provide the activity. This also applies to activities required by claims 27-33. Corn steep liquor would have provided the  
20 additional components of dependent claims. If not provided by corn steep liquor, such components in an animal feed additive are conventional, and their addition would have been obvious. The present claims do not exclude a moist solid as disclosed by De Lima et al. Moreover, it would have been obvious to further dry the composition to  
25 obtain greater storage stability and less bulk for transportation.

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**Double Patenting**

5 The nonstatutory double patenting rejection is based on a  
judicially created doctrine grounded in public policy (a policy  
reflected in the statute) so as to prevent the unjustified or improper  
timewise extension of the "right to exclude" granted by a patent and  
to prevent possible harassment by multiple assignees. See *In re*  
*Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*,  
759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686  
F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164  
10 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644  
(CCPA 1969).

A timely filed terminal disclaimer in compliance with 37  
CFR 1.321(c) may be used to overcome an actual or provisional  
rejection based on a nonstatutory double patenting ground provided the  
15 conflicting application or patent is shown to be commonly owned with  
this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of  
record may sign a terminal disclaimer. A terminal disclaimer signed  
by the assignee must fully comply with 37 CFR 3.73(b).

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Claims 19-33 are rejected under the judicially created doctrine  
of obviousness-type double patenting as being unpatentable over claims  
1-15 of U.S. Patent No. 6,610,519 B1. Although the conflicting claims  
25 are not identical, they are not patentably distinct from each other  
because the presently claimed composition containing a phytase enzyme  
and a lactic acid source would have been obvious from the same type of  
composition of the patent claims that the present claims encompass.

**Conclusion**

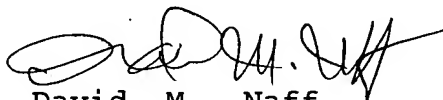
30 Any inquiry concerning this communication or earlier  
communications from the examiner should be directed to David M. Naff  
whose telephone number is 571-272-0920. The examiner can normally be  
reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful,  
35 the examiner's supervisor, Mike Wityshyn can be reached on 571-272-

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0926. The fax phone number for the organization where this application or proceeding is assigned is 751-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David M. Naff  
Primary Examiner  
Art Unit 1651

DMN

15 7/2/05